

THE ICRAF DOCUMENTATION CENTRERECOMMENDATIONS FOR THE NEXT TWO YEARSJOHN E. WOOLSTON(IDRC OTTAWA)CONTENTSPAGE

Objectives and General Background	1
Comments on Scope and Operations	3
Secondary Journals	4
Retrospective Computer Searches	5
Primary Journals	5
Reference Books	6
Monographs (essentially textbooks)	6
Individual Papers	8
Species and Geographic Index	11
Current Awareness Services	12
Information Packages	13
The KARI Connection	16
An International Journal of Agroforestry	17
Other Matters	18
Conclusion	20
Summary Annual Budgets	21
Appendix A - Secondary Journals	22

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## OBJECTIVES AND GENERAL BACKGROUND

I see my task as leading to two sets of recommendations for the development of documentation/library activities at the ICRAF headquarters in Nairobi. These recommendations correspond to the following assumptions:

Level-A Activities: No major increase in staff and budget is to be obtained in the near future. Operations will be carried out by existing staff (Lucille Teemba and Jennifer Aoko) under the supervision of Trevor Chandler and with the cooperation of the other scientific staff.

Level-B Activities: A "project" is to be described for which the financial assistance of donors can be sought thus permitting an increase in staff and services.

If my recommendations are accepted, they should be reviewed again within two years. ICRAF is a young organization, and its research program is still in the process of detailed definition. The documentation/library activities must be an integral part of the total program and cannot be seen as having an independent existence. As the ICRAF research program acquires more concentration and focus, the documentation/library activities must also be adjusted to the new priorities.

Within the two-year time-frame, it turns out that, operationally, the Level-A and Level-B activities are scarcely different from each other. This is to be expected, the documentation/library activities must be defined in relation to the current ICRAF objectives and to the organization's scientific capacities at its present level of development. More money (Level-B) could permit a more intensive effort on these activities, but should not itself be the cause for making a premature start on activities that the organization is not ready yet to integrate into its total program. In fact Level-B is only a modest increase over Level-A.

Before elaborating on my work and recommendations, I must state a general point-of-view that I bring to the task from the outset. It is that any specialized documentation centre is to be judged more by the quality than by the quantity of its services. There is no substitute for scientific excellence. The demand made by the users on such a documentation centre has a high degree of elasticity. If the services provided are scientifically sound and are specific to the needs of the users, the services will be found useful and stimulating, and the demand for them will grow; on the other hand, even voluminous services will be ignored by the user if they are weak from a scientific point of view and not sharply focussed on needs.

It is also true, of course, that documentation services will be ignored if they take too long to respond to enquiries. Hence, if ICRAF is successful in building a useful documentation service, it must find ways to put in additional resources if the demand so requires. But, of course, ICRAF will then have a case for seeking more resources. Quite properly, it is usually easier to get resources to meet a demand than it is to set up a program to create a demand.

And it is an essential corollary of the emphasis on scientific excellence that the scientific staff of ICRAF must become involved in the running of these services - they can not leave them to the documentalists alone. An incoming technical enquiry may be addressed to the Director General, to an individual member of the scientific staff, or to the documentation centre. But the level of response should be determined by the enquiry itself and not by the happenstance of the address on the envelope. Even what appears to be a routine request for a particular document may be an opportunity for ICRAF to establish a new scientific relationship. It only takes a moment for the documentalist to ask a scientist whether he wants to add to the reply. Obviously this will not happen when the request comes from an institution that already has a close relationship with ICRAF, but certainly it is worth alerting a scientist if the request comes from an institution not having a previous connection with the organization. And, my strong personal view is that the most appropriate scientist must be involved if the request is a request for information on a subject rather than a request for a particular document. In such cases, the scientist, in association with the documentalist (or vice-versa), should normally prepare a reply in the form of a letter personally addressed to the enquirer. The letter may be supported by a bibliography, ICRAF publications, or a bunch of photocopies - but the very act of writing even a brief letter helps to ensure that the reply is put into the enquirer's frame of reference. It is also the very best kind of "public relations".

Conversely, if a scientist receives and himself is going to act on a technical enquiry, he should involve the documentalists: they may already have a useful file on the subject. And the scientist should ensure that the documentalist receives copies of the exchange of correspondence. Such exchanges are often the most useful and pertinent of the information available to the institution, and they should be accorded as much respect as reprints of formally published papers. They are likely to reflect the most up-to-date state of knowledge, the policy of ICRAF, and the wisdom of the scientist concerned. If the documentalists deal only in formal documents, they cannot be instruments of ICRAF's total policy and program.

## COMMENTS ON SCOPE AND OPERATIONS

Any documentation centre or library performs the following functions:

- Acquisition
- Processing
- Distribution

Of these, of course, only the last represents a pay-off. The first two can only be justified as means to this end.

Acquisition is the bringing into the centre of the documents that are or will be needed. These may be books, periodical articles, reports etc. I will not be dealing in this report with audiovisuals. I have already mentioned the importance of certain types of ICRAF correspondence (particularly responses to technical enquiries) as an important resource for the documentation centre.

But, presented with the title of a book, article etc, the documentalist has to make a decision whether or not to obtain it. There is the possibility of recording a title in some index without actually obtaining the document, but a "yes" or "no" decision still has to be made. Of course, if a need for a particular item has already been expressed, a "yes" decision - subject to any financial implications - can be made with confidence. On the other hand, librarians and documentalists often wish to anticipate needs and to acquire items on the basis of educated guesses about whether they will or will not be needed in the future.

Research, however, is becoming more and more "inter-disciplinary". Hence it is becoming more and more difficult to determine in advance what will or will not be relevant. For a specialized centre that deals with a highly focussed topic, e.g. a particular crop, yes/no decisions can still be made with some confidence. But for a subject as broad and varied as "agroforestry", I submit that it would be exceedingly difficult to define a "subject scope" that would be a realistic guide for collection. ICRAF cannot do everything. If only because of limitations on its financial resources, ICRAF will need to concentrate on particular topics: the day may well come when even the word "agroforestry" in the title of a document (a rare event at present) will not be a sufficient indication of the relevancy of the document to ICRAF's actual program. In the meanwhile, almost everything in the scientific literature of agriculture and forestry (FAO estimates approaching 250,000 items/year) could be relevant.

I argue that, confronted with this situation, ICRAF should collect a document only when it has clear evidence of a need for that document, and I shall offer suggestions how such a policy might be implemented.

Processing (cataloging, classification, indexing, storage) has, for ICRAF, no validity in itself - only as a means to an end. Processing can demand a heavy investment of staff time. It is here that the greatest possible economy should be exercised. Intellectual resources unnecessarily taken up in processing are intellectual resources taken away from the only valid purpose of the centre - which is to provide service to clients.

I shall try to recommend a level of processing that will be the least possible for the effective operation of an outward-looking documentation centre.

Distribution is the most important activity. But I shall recommend a "rifle" rather than a "shotgun" approach. This implies a heavy investment of intellectual resources on the part of ICRAF, treating each enquiry as a special case (at least until experience shows that a given enquiry repeats itself many times). Only by doing so will ICRAF learn who its clients are, what their needs are, and at what levels of sophistication the clients are able to absorb technical information.

#### SECONDARY JOURNALS

If ICRAF is not going to collect documents in anticipation of needs (but only when the need is known), then it must have means for rapidly identifying those documents that do respond to an expressed need. I therefore propose that ICRAF should continue its policy of providing a generous budget for the purchase of secondary journals (abstracting and announcement services).

In Appendix A, I have listed those that ICRAF already obtains, together with a list (and approximate prices) of others that might be considered.

ICRAF should consider obtaining back-runs (up to five years) of those secondary journals that prove most useful. Those that it continues to keep should be bound to prevent loss of individual issues.

### RETROSPECTIVE COMPUTER SEARCHES

In the modern world, large computerized files can be remotely searched from terminals connected through the telephone system. This has been demonstrated in Nairobi, but the cost of telephone linkages to North America or Europe is prohibitively expensive.

Such searches could be carried out by "agents" of ICRAF (e.g. IDRC Ottawa for North American services; PUDOC for European services).

However, some of the advantages will obviously be lost. The "agents", however well briefed, will never have the same sensitivities as would ICRAF staff in formulating the search tactics to meet specific needs. Also time will be lost in delivering the computer output by mail. Such searches are not cheap, and should be carefully evaluated from a cost-benefit point of view. It may prove more effective to send staff out to KARI or to other libraries in Nairobi, to do retrospective searches in the back-runs of secondary journals (most of the computerized bases are, in fact, derived from these journals).

### PRIMARY JOURNALS

I fully endorse the present ICRAF policy of not investing in primary-journal subscriptions. Inevitably one ends up buying far more text than will ever be read - and the subscriptions are very expensive. Given the availability of many of these journals in Nairobi and the state of development of local photocopying services, ICRAF has no real need to build up a collection of this type of material.

Even journals that come free-of-charge, e.g. through gift or exchange, should be viewed with suspicion. Managing such collections takes up the time of the staff - as well as storage space. Inevitably some issues will not arrive or will get lost: an incomplete run just leads to frustration, and to fill the gaps takes a lot of effort. Any journals received free-of-charge should, unless exceptional circumstances prevail, be offered to KARI or other interested Nairobi libraries. If there is no interest on the part of these libraries, the journals might be kept for one or two years and then discarded.

There are some "news" journals (e.g. house organs of other research centres) that are of ephemeral interest and could be displayed for the use of ICRAF staff for, say, one year. Thereafter they should be donated to other libraries or discarded.

To maintain the general scientific interest of the ICRAF staff, I would endorse the present policy of subscribing to a few journals of the Scientific American type. A possible selection mechanism might be to allow each staff member to name one (maximum two) journals that he would like to see regularly. The list should be subject to annual review, and there should be readiness to drop a journal if it is not being used. Back numbers (over one year) should not be kept. In a developing country, there is an enormous appetite for this type of material, and the back numbers will be welcomed in many different colleges.

#### REFERENCE BOOKS

The "endowment" from IDRC has given ICRAF a reasonably good set of reference books - encyclopedias, dictionaries, directories, atlases. There are a few - particularly the Canadian national directories - that could probably be discarded. But the collection needs to be continually up-dated and, even now, could probably be strengthened with a few more "scientific" items (I wish I could remember the official title of the invaluable compendium of chemical and physical data that I always know as "The Chemical Rubber Handbook" - this title invokes the Chemical Rubber Company which originated its publication). The scientific staff of ICRAF should be invited to make suggestions for strengthening this collection.

I suggest an initial budget of \$1000, plus \$500-1000/year for renewing the collection thereafter.

#### MONOGRAPHS (Essentially textbooks)

There are peripheral areas where ICRAF does not need to be at the frontiers of scientific progress (which requires a constant watch on the journal literature), but does need to have access to reasonably up-to-date consolidated information. This is probably true of such fields as chemical and biochemical analysis, statistical analysis, general soil science, general plant physiology etc. For such fields, the "up-to-date consolidated information" is best found in monographs - state-of-the-art reviews and graduate-level textbooks. At present, I believe the ICRAF collection is weak in this respect.

It can be reasonably expected that the ICRAF collection of such works would grow into the range of 500-1000 volumes and then level out, with discards balancing new purchases.

For reaching this state, I recommend that each new member of the scientific staff - on arrival - be permitted to request purchases of monographs up to, say, \$200. Arriving scientists will come with a knowledge of the textbooks

on which they have relied in the past, and their recommendations should be given considerable weight.

In addition ICRAF should budget \$50-100 per scientist-year for ongoing purchases of monographs.

There are some other books that can best be housed with the collection of monographs. For example, ICRAF, while its main interest is in particular papers contained in a volume of conference proceedings, may find it convenient to buy the whole volume. Such purchases would really come out of the budget for "Individual papers" (see below), but the physical nature of the object dictates that it should be handled as a book.

The collection of books needs to be "classified" i.e. grouped according to subject and shelved accordingly. This facilitates browsing. Only those items that are reasonably well bound with visible words on the spine should be treated in this way. All others (reports, pamphlets, photocopies) should be treated as "individual papers". In the ICRAF situation, the only purpose of classification and open-shelving is to encourage browsing. Having a lot of loose papers on the shelves would only hinder the process.

But what classification? - and who will do it? One can invent one's own classification and, at the outset, this may seem to be the easiest procedure. But as time goes on, it becomes a headache. It is simply not possible to predict how the collection will grow and which categories will eventually need sub-dividing or re-organizing. Better, I believe, to use a standard classification from the outset. This has a built-in mechanism for handling growth and can be useful if, at a later stage, books are transferred between libraries.

I recommend that each book in this collection be given a "short" UDC classification and a call number. A professional cataloguer handling this should be told that the longer form of UDC (which permits cross-indexing) is not needed - that the purpose is only to provide a shelf arrangement that facilitates browsing.

During a visit to KARI, we discussed this question with Mr. Lazarus, the chief librarian. On his staff, there is a cataloguer (Mr. Evanson) who has had experience with UDC. Later in this report I shall be commenting on "the KARI connection", but I am happy to record here that there appears to be a willingness to let Mr. Evanson come to ICRAF for, say, one half-day per week to classify the ICRAF collection. I believe this would be worth arranging.



I propose that only one separate card index to the book collection be maintained. This could be ordered by classification and call number and be used for inventory-checking purposes. But, as for "individual papers" (see below), each book (and where appropriate, chapters of the book) would be given accession numbers, and thus the book collection would be accessible through names of first authors, species and geographic entities.

### INDIVIDUAL PAPERS

This, as at present, will be the most important part of the collection of the ICRAF documentation centre. It will include:

- photocopies of journal articles and conference papers
- technical reports
- pamphlets

For convenience I will refer to this collection as the ICRAF "data base". The present practice of assigning an accession number to each item is endorsed. However, it has become a moot question whether every such item entering ICRAF should be given the accession number and associated processing and thus enter the data base.

Some items arrive unsolicited: they may or may not be useful. Scientists ask for a photocopy - to look to see whether the item may be useful, but until they have seen it, they cannot determine whether it is (a) not useful, (b) useful on a personal basis, or (c) likely to be of some continuing usefulness to ICRAF as a whole.

But we cannot afford to make a big issue of deciding (a), (b) or (c) in every case. Since I am proposing only a minimum level of processing, the cost of entering an item in the data base will be small. It is therefore better to err on the side of having too many items accepted than too few. I propose that an item enters the data base if one person asks that it should - given that one request, no argument! The one person could be either a scientist or a documentalist.

Up to now, the thinking has been that, for each item, index cards will be prepared for:

First-author and title (cards filed alphabetically)

Species (as many cards as there are species in the principal subject matter of the item)

Geographical entities

Subjects (a set of cards for each item, one card per descriptor).

The author/title and species indexes are currently being maintained; the geographic and subject indexes are in abeyance.

I fully endorse the first-author index but believe that the title cards can be safely abandoned. Note also that "anonymous" is not a useful author entry.

I propose that a set of cards (one per document) be maintained in the straight numerical sequence of accession numbers (note that this is a purely clerical operation and requires no professional input). The purposes of the "accession number index" are:

- (1) To identify a missing item
- (2) As means of recording loans (the names of borrowers can be written on the back of the cards)
- (3) To identify items that are discovered as "hits" in a search of the species and geographic index (see below). The cards can be pulled from this index, laid out on the xerox machine and the product given to the enquirer.

I propose a new form for the species and geographic index. In view of the importance of this, I am discussing it below in a separate section.

I recommend that the idea of a subject index of individual documents be abandoned. Instead, I am proposing that the subject approach to the collection be through the medium of "packages", and I will deal with this also in a separate section below.

Subject indexing of individual documents by descriptors is a very time-consuming process, and it would eat heavily into the time that the documentalists might otherwise devote to giving service to clients. It also implies the development and maintenance of a "thesaurus" - itself an onerous job. Even at Level-B, I do not see a possibility of ICRAF having enough resources for all of this. To start and not to carry on would be an unacceptable waste of effort. Too many documentation centres have set out to do this job and have bogged down. And, in any case, I believe there are better ways to handle real needs.

If my recommendation is accepted and the subject indexing of individual documents is stopped, I imagine this may lead to some disappointment. After all, it is a real intellectual challenge to the documentalists. I hope, however, that the alternatives that I suggest below will themselves be seen as being at least an equal challenge to the professional skills of the documentalists.

Although I have headed this section "individual papers", the data base can also include books, chapters from books, or individual papers from conference proceedings. In all such cases an accession number would be assigned and the "call number" from the book collection would also be written on the cards. This procedure makes it necessary to photocopy book chapters for the boxes in which individual papers are held.

And if this procedure is applied to all books, it would mean that there would need to be only one author index in the documentation centre ( covering books as well as individual papers).

It is very difficult to budget even for the acquisition costs of the "individual papers" to be put in the data base. The major item is the cost of photocopying, whether carried out in the house or externally. British Library coupons are quite expensive (they incorporate airmail postage as well as photocopying), but are only used as a last resort. KARI has been very generous and does photocopying for ICRAF free-of-charge: but can one really expect this will continue indefinitely? In-house photocopying appears to cost about US\$ 0.10 per page, and perhaps this can be our best guide.

However, how many documents will be added to the data base per year? If selection were made only by the ICRAF scientists, one would probably have not more than about 50 per scientist-year. But, particularly if Level-B is implemented, the documentalists will also be selecting material for the data base. I am assuming that the figure is in the range from 500-2000 documents/year, which implies (average 20 pages per document) a photocopying cost of \$1000 - \$4000 per year. Purchase of reports, conference papers, etc. might add another \$500/year.

The major cost is, of course, staff - and this is treated separately.

## SPECIES AND GEOGRAPHIC INDEX

The present system of filing cards behind names of species and names of geographic entities is limited in its usefulness. Agroforestry is concerned not with individual species, but with combinations of species (intercropping, multicropping). One may be interested in information on species A, but one is particularly interested in species A with species B. To get this at present means hand-sorting and matching two sets of cards from two different locations in the card index. This will become increasingly difficult as the data base grows.

If one had the facility to look for combinations, these could be made quite subtle (and powerful), e.g. Species A with (species B or Species C) in country D.

To achieve this, one needs an optical-coincidence (e.g. Termatrex) system, or edge-notched cards which can be sorted with a needle. A really good Termatrex installation would cost about \$10,000; an edge-notched card system probably about \$1500. However I think I would recommend the more sophisticated installation because it could also be useful in meeting another ICRAF requirement.

Dr. Chandler has begun to produce data sheets on individual species, indicating the conditions under which they grow, their economic utility etc. These sheets could be coded into an optical-coincidence system to permit rapid identification of those species that meet particular requirements. While not, at present, a very complicated requirement, this is taking on some of the characteristics of a genetic data system, and it may be elaborated in the future as the results of field trials come in. Hence a system capable of expansion is desirable.

But let us return to the application of such systems for the document data base. I believe the ICRAF documentalists need some advice on how to cope with species within genera as well as broad classes of crops ("pasture legumes"). This implies structuring the list of allowable terms and introducing "see also" relationships between, say, a genus and its species. Little tricks need to be devised to deal with situations that are more complex. For example, one document may deal with species A with species B and species X with species Y. On a search, however, it would be a false "hit" to get species A with species Y etc. Probably the easiest solution is then to assign two accession numbers to the same document and give it separate treatment for each of the species combinations that it deals with.



More detailed advice on this subject should be obtained from a specialist. In fact, Donald Leatherdale will be in Nairobi for two weeks from 23 April 1979. While he has important duties in relation to an FAO/IDRC/CRIT seminar on AGRIS, I recommend that ICRAF invite him to spend a few hours on this and to give advice both on the selection of equipment and on the structuring of the species and geographic terms.

#### CURRENT AWARENESS SERVICES

As has been suggested several times in this report, I believe that the ICRAF documentation centre should go out chasing documents only when there is a defined need for them. Nevertheless, scientists like to be informed about new articles as they appear and to have the opportunity of seeing those that attract their attention.

To this end, ICRAF already subscribes to the appropriate section of Current Contents. It also has an arrangement with KARI under which KARI sends over photocopies of the title-pages of 96 primary journals. These are circulated among the scientific staff who, within a period of 14 days, are allowed to identify those particular articles that they would like to see. This is a good service.

It is possible also to consider running "profiles" regularly against the large computerized systems. In the jargon of information scientists, this is called SDI (selective dissemination of information).

A profile can be very straight forward, e.g. everything on a particular species, or it can be quite subtle, playing with words that authors might have used in titles, their synonyms and near-synonyms, combinations etc. Such a service cannot be obtained in Nairobi, but could be obtained via IDRC or PUDOC. The time penalty for mailing is, in this case, not important - since the outputs are still likely to reach Nairobi before the journals get to local libraries. The costs are significant (the following figures are average, typical costs for one profile):

AGRICOLA (data base of the US National Agricultural  
library)

C\$ 84/yr

BIOSIS (Biological Abstracts)

C\$126/yr

CAB - not available in Canada. But can be  
searched in US from Canada

Cost will depend on  
frequency of search;  
if quarterly, probably  
can be held around  
\$100-\$200/yr

AGRIS - not available in Canada at present.  
Available at PUDOC, cost unknown

As indicated previously, I recommend that the articles announced by any of these services should not automatically be acquired for the ICRAF data base, but only if specifically indicated by one of the scientists or documentalists.

#### INFORMATION PACKAGES

Now we come to the heart of the matter. The most useful activity that the documentalists can perform is chasing down information that responds to real known needs. Let us imagine that we have just received an enquiry from a developing-country institution asking for support of a research project dealing with, say, the cultivation of steep slopes to maximize the production of nutritive animal fodder; soils, climate and possible species are identified. Clearly this enquiry is going to be handled by one of the research scientists, but there may be gaps in his knowledge. He will ask the documentalists for help on a number of specific topics, perhaps:

- what is known about the nitrogen production capacity at the roots of pasture legumes A, B and C?
- what is known about the amount of light that comes through the canopy of a closely spaced plantation of trees of species X?

and so on.

For each of these specific questions, a file is started. There may be correspondence with other institutions. References to relevant documents may be found. Eventually the scientist writes to the enquirer giving advice based on his own knowledge as well as on the information that the documentalists

have been able to dig out. Photocopies of documents need not be kept in the file; these would be added to the ICRAF data base. But the file would contain xerox copies of the index cards for these documents so that, on a subsequent occasion, they can again be easily retrieved from the collection.

The files would become the principal assets of the ICRAF documentation centre. Note that, of course, the number of files would be far fewer than the number of documents. Hence, for some time, there would be no need for a fancy index of files. Apart from anything else, since considerable work has been put into each of them, they will figure strongly in the memories of the individuals involved. Eventually, an index to the files may be needed but, by then, one would have far better ideas than now about how such an index should be designed.

Each file is what I call an "information package". A given document may be relevant to more than one package, but we would need to keep only one copy of the document itself, it being represented by cards in the several packages.

Most packages would lie dormant after the original enquiry had been answered. They would be re-used - probably up-dated - if and when the enquiry repeats itself. If experience showed that a given package was frequently needed, instructions should be given for it to be continuously maintained. In this case, one would write an appropriate profile to be run monthly or quarterly against the computerized systems (as discussed earlier in this report under "current awareness services"). Indeed this is probably the most appropriate use of these computerized services (to support the maintenance of a very active package). Broad profiles descriptive of the general range of subjects treated by ICRAF are likely to produce printouts whose bulkiness will deter scientists from making real use of them; specific profiles are more likely to be used.

When a package is very active, this should be seen as a signal that a state-of-the-art review is needed - and the package itself would then be a most useful starting point. I warmly support ICRAF's intention to devote a significant part of its scientific resources to the preparation of state-of-the-art reviews. But I do believe that ICRAF will achieve more by devoting this effort to specific "hot" topics than to more general ones. Apart from anything else, a specific state-of-the-art review can be completed much more quickly than a general one; it will involve consultation with fewer specialists, less literature research, less writing and a slimmer product.



ICRAF can achieve an impact much more quickly through specific than general state-of-the-art reviews. And, because specific state-of-the-art reviews address a more specialized audience, they can usually be written at a more "scientific" level.

But care must be taken not to pitch the writing at too high a "scientific" level. ICRAF's aim is to engage the developing-country researchers, most of whom will have been trained locally rather than at the advanced western schools. This does not mean that the writing has to be patronizing, but it cannot presume knowledge of sophisticated research techniques and recent theory; if such material is relevant, it should be recounted. I am very happy indeed that my colleague, David Spurgeon, will be making his talents available to ICRAF in the next year or so. As writer, editor or consultant, his exceptional experience will be most useful to ICRAF in "pitching" a scientific text at the level of understanding of the target reader (and the correspondence in the "package" will go a long way to characterize such readers).

And, of course, once a state-of-the-art review is written, the package can be stripped, and the review itself becomes the new point of departure.

Not all packages will be initiated by an enquiry from outside. Some, particularly in the early days, will be initiated by scientists in Nairobi. But one must be careful. Some subjects are scientifically fascinating, and one is tempted to put effort into them because of the intellectual challenge that they provide. However, an enquiry coming from outside re-inforces one's conviction that the subject matter is relevant to the research programs that ICRAF is established to support.

And, please, keep the subjects specialized. All information scientists know that enquirers have a psychological temptation to broaden every subject definition just to be safe and to have a better assurance that they are not missing anything relevant. But this gets us back into collecting what "might be" useful as opposed to what "will be" useful. The temptation should be resisted. If the need is for information on the extent of a cultivation practice in Kenya, do not ask for information on the extent of this practice in East Africa. True, the extra information might be illuminating, but you will be dissipating the efforts of your documentalists when they might be working on something more immediately important - and they are likely to do a less thorough job on Kenya itself!

It is in the development of packages that we see the biggest difference between Level A and Level B. I would propose that, at Level B, an additional full-time professional be employed. This person should have a scientific



background in agriculture/forestry preferably at the level of research. Whether he/she has had an academic training in information science is less important.

Although summer courses in information sciences are, regrettably, not available for people below the level of university graduate, they are available for graduates. I am sure we could arrange for a new professional to attend one of the better summer courses (e.g. Sheffield).

But, even with the additional staff (and certainly without it), I would strongly recommend that an ICRAF scientist be named as "consultant" for each package. The package must reflect, not only what can be dug out of the literature, but a scientific judgement in the context of ICRAF's policy and program. If you have a reasonably well qualified scientist as your senior documentalist, then he/she can act as the "deputy" of the consultant when the latter is travelling.

#### THE KARI CONNECTION

As has been remarked earlier in this report, ICRAF is getting exceptionally generous services from KARI (loans, photocopies, current awareness services). It is difficult to quantify this in dollar terms, but the photocopies alone (without KARI staff time) are certainly worth several hundred dollars a year, perhaps as much as a thousand dollars.

In this report, I have also suggested that an arrangement be negotiated for Mr. Evanson to come from KARI once a week to classify books at ICRAF. He could also help Lucille and Jennifer by giving advice on library techniques for such things as controlling loans.

Mr. Lazarus, the chief librarian at KARI, tells me that he is doing this because he appreciates the connection and also because his Director has told him that ICRAF is a very important new institution in Kenya and should be given "first priority". And, indeed, this is done: requests from ICRAF go on the top, not the bottom, of the pile.

I believe that this goodwill should be re-inforced: it is invaluable to ICRAF. KARI's library budget has increased, but is still modest. After the journal subscriptions have been maintained, there is money in the 1979 budget for only 31 textbooks, and these have already been selected. Hence, no more this year.

But it would probably not make much sense for ICRAF to make a cash grant to KARI. For KARI to spend the money would then involve all the formidable bureaucracy of the Kenyan Ministry of Agriculture. I believe it would be better to have a "gentlemen's agreement" between the Director-General of ICRAF and the Director of KARI. Under this, KARI would agree to continue the existing cooperation and allow Mr. Evanson to come to Nairobi, and ICRAF would put aside, say \$2000/year to buy books and/or equipment at the request of the KARI chief librarian.

ICRAF's purchasing procedures are, comparatively, much more speedy. The books etc. could be delivered to the ICRAF office, perhaps be stamped "Presented to the Kenya Agriculture Research Institute by the International Council for Research in Agroforestry", and be shipped out to Muguga when a car is going.

#### AN INTERNATIONAL JOURNAL OF AGROFORESTRY

While agroforestry has been practised for millenia, and while it has been the subject of research under different names, only very recently has it become recognized as a discipline in its own right. That recognition is embodied in the establishment of ICRAF itself. But, as yet, agroforestry research workers have not formed their own community: the "invisible college" does not yet exist.

It is in ICRAF's interest to hasten the development of the invisible college, and to get agroforestry researchers in direct communication with each other. Perhaps the quickest way to do so is to establish a journal that will:

- (a) attract the best research papers in the field;
- (b) provide news about ICRAF, its policies, programs, projects, personnel and meetings (perhaps also news from other institutions active in this subject area).

But it is too early for ICRAF to become a journal publisher on this scale. Such a journal can become economically viable only if it is marketed vigorously in the industrialized countries (where there are plenty of libraries which would respond to a good sales campaign). That is not ICRAF's principal target audience, but apart from revenue, acceptance in the industrialized countries would give the journal the necessary scientific stature.

One needs cooperation with an international journal publisher (I think my first recommendation would be North Holland Publishing Company, which is less rapacious than some others that could be named!).

An association with ICRAF would be valuable for the journal publisher; this is not a one-way street. But it may take a couple of years of lead-time before a journal could be launched. If my suggestion is accepted, perhaps the negotiations should begin soon - and perhaps David Spurgeon would be willing to help ICRAF in this phase.

One might begin by inviting the journal publisher to make a proposal. The letter should, obviously, point out the significance of agroforestry as a new discipline and the fact that the volume of research papers is likely to increase markedly in the next few years.

The publisher should be told that ICRAF would expect

- (a) to contribute the news section
- (b) to help find good research papers
- (c) to appoint half the members of the editorial board as well as one of its own staff as Editor-in-Chief (for final selection of papers)
- (d) to nominate 100-200 institutions in the developing countries, which would then receive the journal free-of-charge.

If these conditions are accepted, then I would give the publisher a free rein in all other aspects. He has to have his incentives too. If he gouges the market in the industrialized countries, that may not be nice - but ICRAF's principal objectives will have been met.

#### OTHER MATTERS

I regret that I did not have time to go into some other relevant matters. There is Trevor Chandler's effort on data collection. There is the conference program of ICRAF, which will be very important both in information-generation and information-dissemination. Such activities need to be related to the central documentation program. But, at this early stage, it would be wrong to give the impression that everything can be neatly defined.

Relationships will evolve as a result of program - and even personal - factors. The important thing, of course, is not to permit the development of watertight compartments within the organization. Fortunately, given the leadership, the youth and the small size of the organization, this is not likely to happen.

CONCLUSION: The over-riding need for cooperation

What I have proposed here is the simplest arrangement that I can find. A traditional librarian would probably be horrified at the lack of built-in controls. I have gone this way because I believe that, with the very small team that can be devoted to the documentation centre, one must rely a great deal on cooperation with the scientific staff and their understanding of the problems of the documentation centre.

This cannot be assumed. It must be re-inforced. It can best be re-inforced by the Director-General in ensuring that the documentalists are recognized as full members of the ICRAF team. I am pleased to see that this is rapidly becoming the actual state of affairs.

The necessity for cooperation can be exemplified by little things as well as by big things. To take what may seem to be a little one: books are missing from the present collection and the documentalists do not know where they are. When one is in a hurry, one picks up a book, takes it to the office, and fails to leave a note to say that one has done so. But if someone else asks for that book the next day, hours may be wasted before it is tracked down. I could have proposed a complicated lending and recall system (sticking pockets and cards in books as in a public library), but that can only be handled by devoting staff time to it - and it still will not be effective if individuals want to circumvent it. But if individuals recognize their obligation to help those that are serving them, such measures can be dispensed with.

On the larger issues, I can only repeat what I have said before. I believe the "packages" system is the best that can be devised for ensuring that the efforts of the ICRAF staff are focused on real information needs and are not dissipated on "maybe" information needs. But for this to work means that the scientific staff must be willing to make their own contributions to the packages, to see that the documentalists have access to technical correspondence, and to help the documentalists in ensuring that the optimum responses are made to enquiries.

For me, it has been fun. But it was enjoyable only because of the warm welcome that I was given at ICRAF, the time that was devoted to me by the Director-General and the scientific staff, the explanations of the current situation from Lucille and Jennifer, and - last, but by no means least - the intelligence of Agnes in interpreting my abominable handwriting.

SUMMARY ANNUAL BUDGETS

<u>STAFF</u>	<u>LEVEL A</u>	<u>LEVEL B</u>
Senior Documentalist	-	1
Documentalist	1	1
Admin. Assistant	1	1
Typist	-	1
 <u>EXPENDITURES</u>		
Retrospective retrievals (computer)	1000	3000
Secondary journals	3000	4000
Primary journals ( <u>Scientific</u> <u>American</u> type)	500	500
Reference books (initial expenditure <u>\$1000</u> )	500	1000
Monographs	1000	1000
Individual papers (mostly photocopying)	2000	4500
Species and geographic index (equipment <u>\$10000</u> )	500	500
Current awareness services (computerized SDI)	1000	2000
Information packages (covered mainly under other headings; extra photocopying)	500	1000
State-of-the-art review (commissioning consultants, excludes printing)	5000	20000
KARI assistance	2000	2000
	<u>\$ 17,000</u>	<u>\$ 39,500</u>



APPENDIX A

SECONDARY JOURNALS

1. EXISTING ICRAF SUBSCRIPTIONS

Agrindex	£124.68
Agritrop	FF214
Agronomy Abstracts	£ 2.34
Biological Abstracts (to be confirmed)	£738.03
Bois et Forêts des Tropiques	£ 16.53
CC-ABES (Current Contents, Agriculture, Biological and Environmental Science)	£105.16
Fertilizer Abstracts (CAB)	£ 30.08
Field Crop Abstracts (CAB)	£ 53.90
Forest Products Abstracts (CAB)	£ 24.78
Forestry Abstracts	£ 41.80
Herbage Abstracts	£ 33.00
Horticultural Abstracts (CAB)	£ 58.30
SAHEL Bibliographic Bulletin	
Soils and Fertilizers (CAB) Abstracts of World Literature	£ 48.95
Tropical Oil Seeds (Abstracts)	£ 20.90
World Agricultural Economics and Rural Sociology Abstracts	£ 38.50

2. POSSIBLE ADDITIONAL SUBSCRIPTIONS

Bibliographie des Forst und Holzwirtschaftlichen Schriftums	\$ 75.00
Dissertation Abstracts B	\$105.00
Forest Fire Control Abstracts	free
Geographical Abstracts C	\$ 18.00
Tropical Abstracts	\$200.00

Note added on re-typing: The Bibliography of Agriculture is not included in this list because it has many similarities with Agrindex and because KARI has a continuing subscription that is available to ICRAF by visiting Muguga.